

DATE IN 08/16/13	SUSPENSE	ENGINEER PRG	LOGGED IN 08/19/13	TYPE IPI	APP NO. PRG1323160 336
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ABOVE THIS LINE FOR DIVISION USE ONLY

## NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

1220 South St. Francis Drive, Santa Fe, NM 87505



### ADMINISTRATIVE APPLICATION CHECKLIST

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

#### Application Acronyms:

**[NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]**  
**[DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]**  
**[PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]**  
**[WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]**  
**[SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]**  
**[EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]**

#### [1] TYPE OF APPLICATION - Check Those Which Apply for [A]

[A] Location - Spacing Unit - Simultaneous Dedication  
☐ NSL ☐ NSP ☐ SD

Check One Only for [B] or [C]

[B] Commingling - Storage - Measurement  
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

[C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery  
☐ WFX ☐ PMX ☐ SWD ☒ IPI ☐ EOR ☐ PPR

[D] Other: Specify Step Rate Test SWD - 1270

Chevron  
 Skelly Unit #51  
 30-015-05348

#### [2] NOTIFICATION REQUIRED TO: - Check Those Which Apply, or Does Not Apply

[A] ☐ Working, Royalty or Overriding Royalty Interest Owners  
 [B] ☐ Offset Operators, Leaseholders or Surface Owner  
 [C] ☐ Application is One Which Requires Published Legal Notice  
 [D] ☐ Notification and/or Concurrent Approval by BLM or SLO  
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office  
 [E] ☐ For all of the above, Proof of Notification or Publication is Attached, and/or,  
 [F] ☐ Waivers are Attached

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 RECEIVED OOD

#### [3] SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.

[4] **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

Carolyn Haynie  
Print or Type Name

Signature

NM Petro Eng Tech Assistant  
Title

Date

8-14-13

chay@chevron.com  
 e-mail Address



**Paul Brown**  
Petroleum Engineering

**MidContinent Business Unit**  
Chevron North America  
Exploration and Production  
Company  
15 Smith Road  
Midland, TX 79705  
Tel 432-687-7351  
Fax 432-687-7871  
PaulBrown@chevron.com

August 14, 2013

New Mexico Oil Conservation Division  
Attn: Richard Ezeanyim  
1200 South St. Francis Drive  
Santa Fe, NM 87505

Injection Pressure Increase Request

Disposal Permit: Administrative Order SWD-1270  
Maximum Wellhead Injection Pressure: 1,886 psi  
Skelly Unit No. 51  
API No. 30-015-05348  
UL I, Sec 22-17S-31E, 1,980' FSL & 660' FEL  
Eddy County, NM

Dear Mr. Ezeanyim:

Chevron respectfully requests that the maximum allowable injection pressure for Skelly Unit 51 be increased to 2,050 psi.

Skelly Unit 51 has been a salt water disposal well since 2011 and is perforated from 9,444' to 9,646'. No initial step rate test was performed and the subject well was permitted to inject at a maximum pressure of 1,684 psi (0.2 psi/ft gradient).

On August 6, 2013 a step rate test was performed on the subject well. The test identified the formation fracturing at a surface pressure of 2,050 psi. The step rate test is attached for your review.

Chevron is requesting that the maximum pressure be increased from its present 1,886 psi to 2,050 psi. Doing so will allow Chevron to utilize the full pressure capability of its injection facility.

Please contact me at 432-687-7351 if you have further questions.

Yours very truly,

Paul T. Brown  
Petroleum Engineer  
Chevron North America

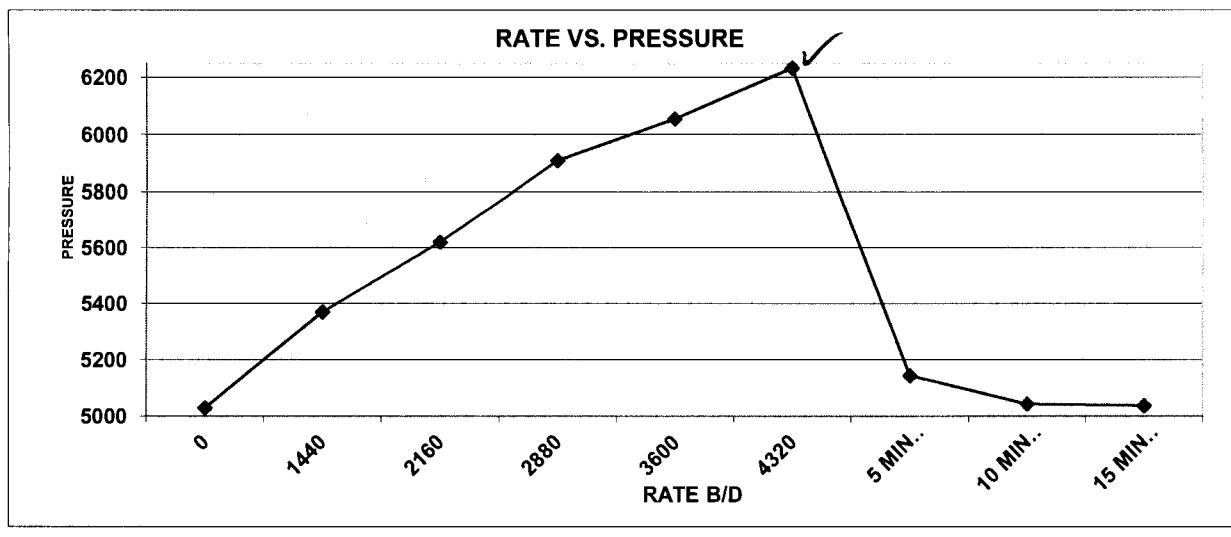
2050 Frac Pres/Requested  
- 50 safety  
2000 psi  
 $\frac{2000 \text{ psi}}{9444 \text{ ft}} = 0.21$



## STEP RATE TEST

graywsi2@aol.com

RATE B/D	Date	Time	BH PRESS	SURF. PRESS	Comments
0	8/6/2013	4:00 PM	5029	300	
1440	8/6/2013	4:15 PM	5370	810	
2160	8/6/2013	4:30 PM	5620	1250	
2880	8/6/2013	4:45 PM	5909	1750	
3600	8/6/2013	5:00 PM	6055	2075	
4320	8/6/2013	5:15 PM	6233	2250	
5 MIN FALL OFF	8/6/2013	5:20 PM	5143	1250	
10 MIN FALL OFF	8/6/2013	5:25 PM	5043	975	
15 MIN FALL OFF	8/6/2013	5:30 PM	5037	950	
Company:	CHEVRON			Recorded By:	T. STANCZAK
Well:	SKELLY UNIT # 51			Witnessed By:	
Field:	FREN			Truck Number:	104
County:	EDDY			District:	LEVELLAND
State:	NEW MEXICO			Tool Number:	
Disposal:	WATER			Test Type:	STEP RATE TESTS
Shut In Time:	5:15:00 PM			FRAC ACHIEVED @ 2.5 B/M 6075 BOTTOM HOLE PRESSURE 2050 SURFACE PRESSURE	
Total Shut In Time:	15 MIN.				
Tubing Size:	3 1/2				
Open Hole:	N/A				
Perforations:	9444'-9646'				
Plug Back Depth	N/A				



# **CHEVRON**

**SKELLY UNIT # 51**

August 6, 2013

## JOB INFORMATION SHEET

Company Information	
Company Name:	CHEVRON
Address:	1500 LOUISIANA STREET HOUSTON, TX 77002
Well Information	
Well Name:	SKELLY UNIT # 51
Field – Pool:	FREN
Status:	DISPOSAL
Test Information	
Type of Test:	STEP RATE TEST
Gauge Depth:	9415'
Production Interval:	9444'-9646'
Production Through:	TUBING
Tubing Pressure:	2250 psi
Casing Pressure:	0 psi
Shut In Time	5:15 PM
Status:	DISPOSAL
Temperature @ Run Depth	96.94 degF
Surface Temperature:	92.01 degF
Comments	
FRAC ACHIEVED @ 2.5 B/M 6075 BOTTOM HOLE PRESSURE 2050 SURFACE PRESSURE	

GRAY WIRELINE

CHEVRON

## WELL INFORMATION SHEET

**Well:** SKELLY UNIT # 51

**Well License:**

**Unique Well Identifier:** 30-015-05348

**Company:** CHEVRON

**Field:** FREN

**Location:**

**County:** EDDY

**Formation:**

**State:** NEW MEXICO

**Purpose:** PRESSURE LOG

**Country:** USA

**Total Depth:** 12,275'

**ID Borehole:** 7.875"

**Packer Depth:** 9404'

**ID Production Casing:** 5"

**Depth of whipstock:** N/A

**OD Production Tubing:** 3.5"

**Depth at which casing is landed:** 12,275'

**ID Production Tubing:** 2.9"

**Depth at which tubing is landed:** 9404'

**ID Drill Pipe:** N/A

## Gradient Data Report

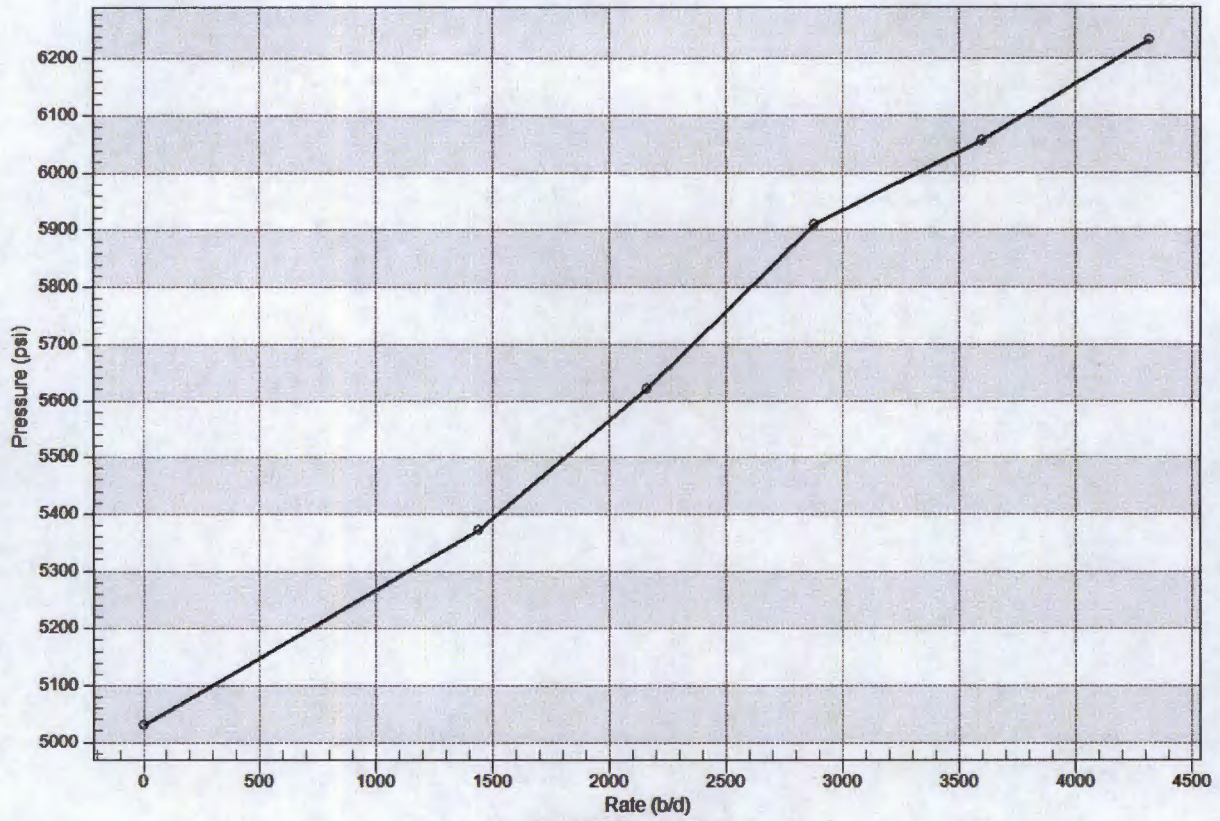
CHEVRON

SKELLY UNIT # 51

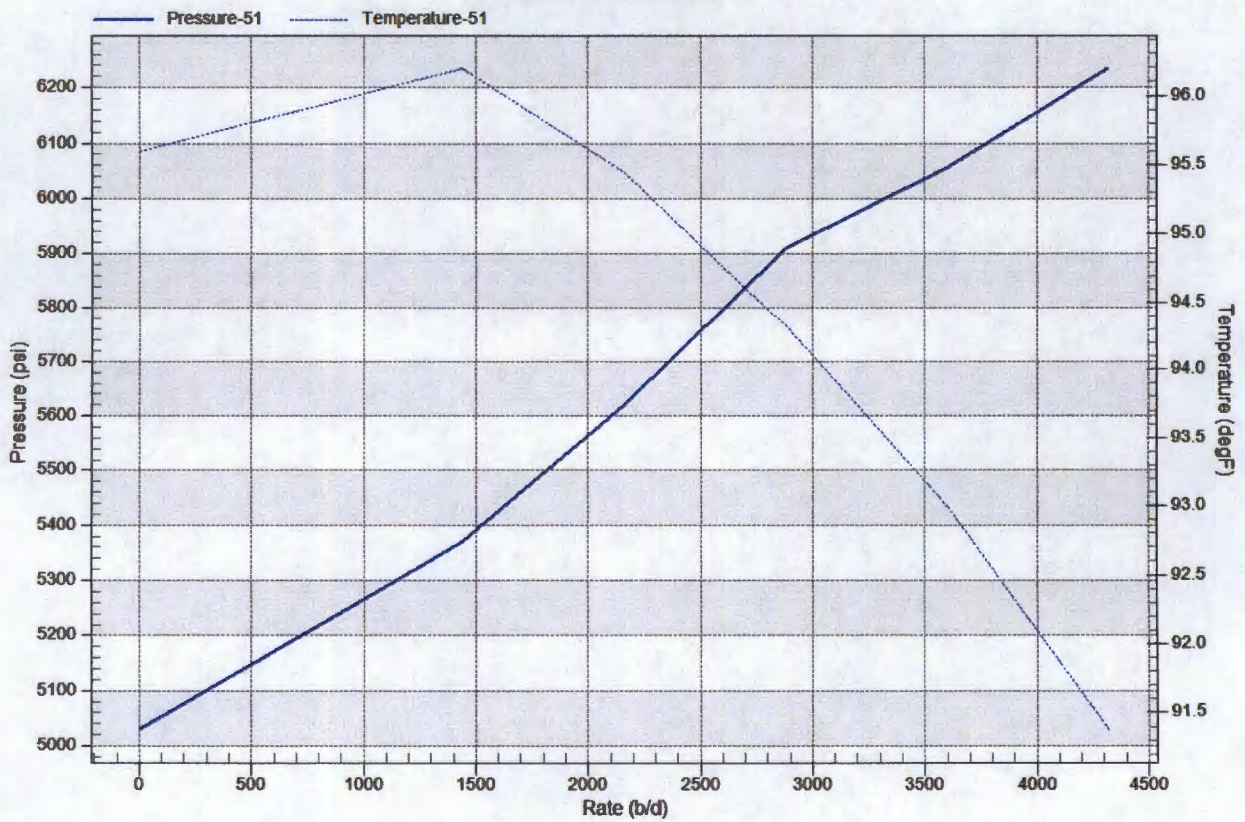
### Gradient Data Table

Rate b/d	Pressure psi	Temperature degF	Gradient psi/rate
0.00	5029.77	95.60	0.0000
1440.00	5370.44	96.19	0.2366
2160.00	5620.25	95.45	0.3470
2880.00	5909.48	94.33	0.4017
3600.00	6055.94	92.99	0.2034
4320.00	6233.86	91.38	0.2471

Pressure vs. Rate

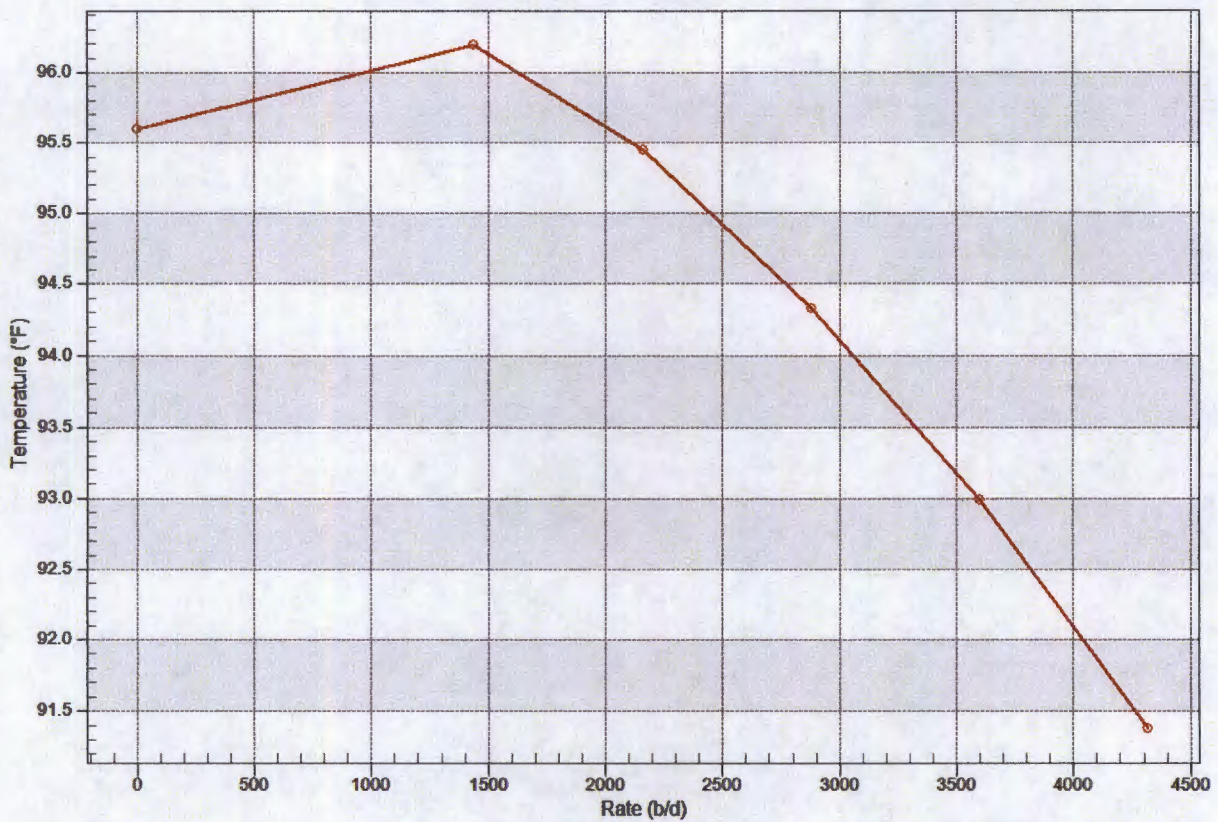


Pres/Temp vs Rate

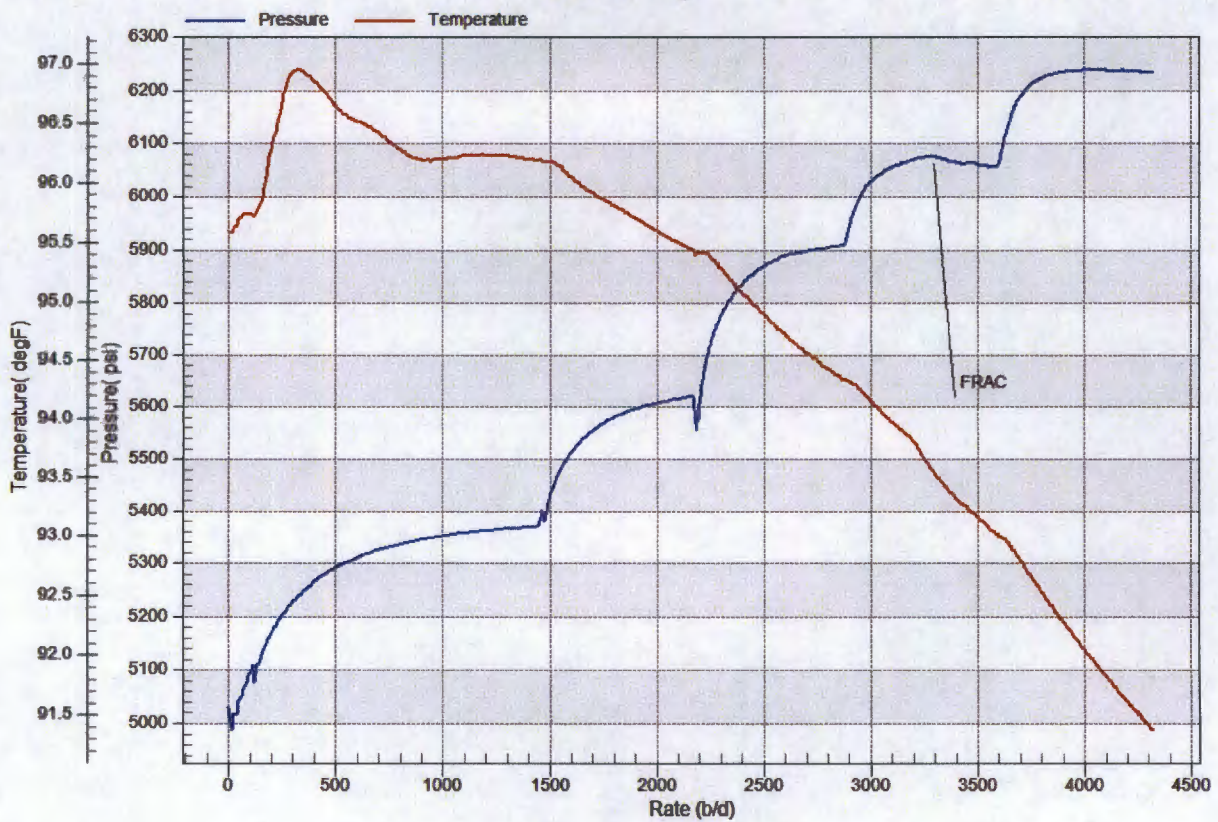




Temperature vs. Rate



Pressure Log





# Skelly Unit #51 Wellbore Diagram

Created: 08/06/13 By: PTB  
 Updated: By:  
 Lease: Skelly Unit  
 Field: Fren  
 Surf. Loc.: 1,980' FSL & 660' FEL  
 Bot. Loc.:  
 County: Lea St.: NM  
 Status: Salt Water Disposal

Well #: 51 Fd./St. #:  
 API 30-015-05348  
 Surface Tshp/Rng: 17S / 31E  
 Unit Ltr.: I Section: 22  
 Bottom hole Tshp/Rng:  
 Unit Ltr.: Section:  
 Directions: Carlsbad, NM  
 Chevno: FC5987

## Surface Casing

Size: 13-3/8"  
 Wt., Grd.: 44.5#  
 Depth: 205'  
 Sxs Cmt: 230  
 Circulate: Yes  
 TOC: Surface  
 Hole Size: 18"

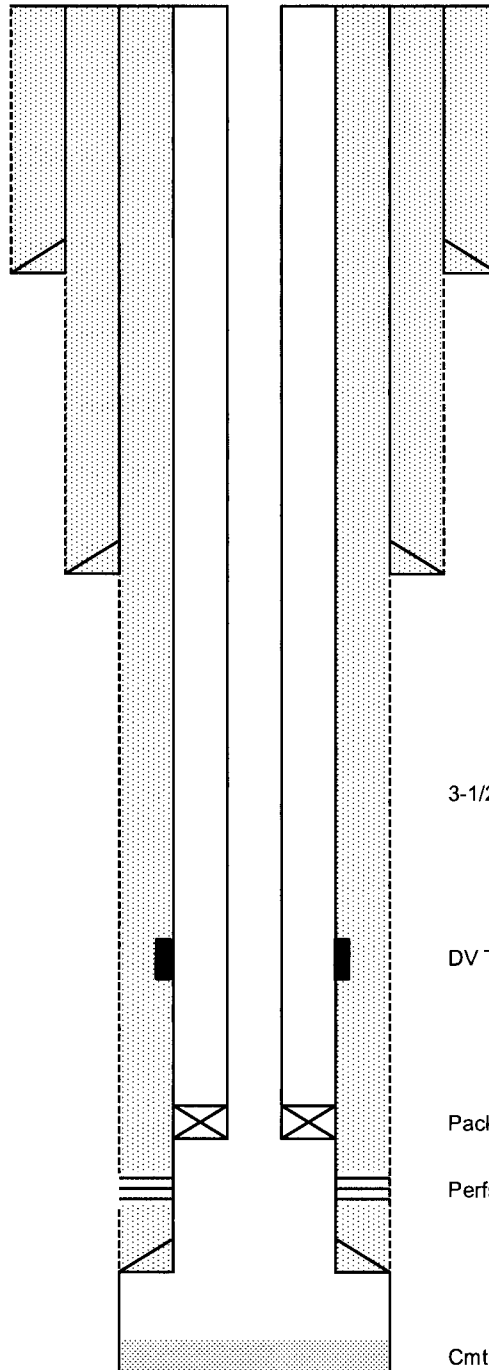
## Intermediate Casing

Size: 8 5/8"  
 Wt., Grd.: 32# J-55  
 Depth: 3620'  
 Sxs Cmt: 1,775  
 Circulate: No  
 TOC: 666' - TS  
 Hole Size: 11"

## Production Casing

Size: 5 1/2"  
 Wt., Grd.: 17#, L-80  
 Depth: 9,787'  
 Sxs Cmt: 1,330  
 Circulate: Yes  
 TOC: Surface  
 Hole Size: 7 7/8"

KB:  
 DF:  
 GL:  
 Ini. Spud: 10/17/54  
 Ini. Comp.: 11/16/11



3-1/2" L-80 IPC Tubing

DV Tool @ 8498'

Packer @ 9404' w/ On-Off Tool

Perfs: 9444' - 9646'

Cmt Plug 11,764'-12,275'

PBTD: 10,090  
 TD: 12,275